

## UNDERSTANDING THE FACTORS WHICH HAVE AN IMPACT ON GREEN CONSUMER BUYING BEHAVIOR

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### ABSTRACT

Serious environmental degradation is forcing us today to take a look into the factors that is causing severe damage to the environment. It is the responsibility of every individuals to act to reduce the environmental damage by adopting sustainable measures in every walk of life. There is indeed no doubt that there has been widespread awareness programs about environmental degradation and adopting green measures, but we need to know are consumers really aware of the environmental degradation. We also need to understand to what level consumers are aware of the green measures which are being adopted. We need to know whether or not the consumers are really adopting any green practices.

The researcher in this paper tries to find out the concerns of the people of Pune about the environment and also tries to find a way to distinguish the green customers. The researcher also tries to find out what makes a customer purchase green products. This will help the promoters of green products to target them and market them better.

**Measurement:** A five point Likert's scale is used to capture the attitudes of the consumers about their feelings about the environment. The parameters used for the study are environmental activism, environmental knowledge, environmental concern, recycling concern, perceived consumer effectiveness, resource saving, economic factor, skepticism towards environmental claims and green consumer buying behavior.

**KEYWORDS:** Environmental Degradation, Green Consumers, Environmental Activism, Environmental Knowledge, Environmental Concern, Green Consumer Buying Behavior

### INTRODUCTION

Our Planet, Earth, is reaching to a high level of environmental pollution which is very alarming and dangerous. The consequences of the high environmental pollution level are the drastic climate changes, the rise in the temperatures and the health issues coming up. People are now more concerned about the health, the environment and also about the livelihood of the future generations. Everyone is worried how to evolve ways to reduce the effects of global warming. The cause and concerns of the people is also leading to the development of environmental friendly products and ways and means to reduce the pollution levels and save the environment. Along with major steps taken by governments to reduce the effects of global warming, marketers are coming up with environmental friendly green products and also focusing on maintaining a green supply chain. Right from sourcing of raw materials for manufacturing of the products to the end product use by customers and recycling of the waste, green marketers are taking an effort to practice sustainability.

Research studies have been done to identify the characteristics of green consumers and the marketing implications by researchers like Schlegelmilch et al. (1996); Lee (2008); Pickett-Baker and Ozaki(2008) and Paço and Raposo

(2009). Man nature orientation value emanates from the Chinese culture and proposes that 'people should behave according to the way of nature' (Chan, 2001, p. 392). Chan and Lau (2000) also adds that this orientation determines the relationship between human beings and their environment. This belief suggests that to a large extent, nature is unalterable and should be respected by man. It seems man nature orientation might have a positively influence on an individual's ecological affect, environmental knowledge and commitment to buy green products (Chan and Lau, 2000). Mostafa (2007), also examining consumer behavior, determined that consumers green purchase behavior is influenced by their knowledge of environmental issues, their natural environment orientation, and their personal concern for the environment.

## LITERATURE REVIEW

**Green consumer** is an individual who adopts and inculcates attitudes, beliefs and behavior that are conducive to minimize the adverse effects on the environment (Banerjee et al., 1995). He practices sustainable consumption, minimizing the use of natural resources, toxic materials, emissions of waste and pollution, which will not harm the needs of future generations (Kilbourne et al., 1997). Green consumers are sincere in their intentions, with a growing commitment to greener lifestyles. They are eager to learn more about controlling environment pollution. The green consumers have the education and intellectual orientation to appreciate value and they understand the evidence that is presented in support of environmental claims.

**Green marketing** includes all the activities which are basically used to generate and facilitate any exchanges which are intended to satisfy human needs, with minimal damage to the natural environment. Peattie and Charter (1997) said green marketing would be more meaningful if viewed as a concept that integrates and expands upon the ideas embedded in the ecological and societal marketing concepts.

Efforts to understand the demographics of green consumer can help marketers to explore the green marketing environment and find out the likely prospects. Targeting the consumers we see that the most responsive age group tends to be the young adults, many of whom are influenced by their children. We also see women as a key target for greener products, and often make purchases on behalf of men. However the best 'green' customers are people with more money to spend. This shows that the most promising products for 'greening' tend to be at the upper class of the market. The most promising outlets for green products are the retail outlets frequented by better-off shoppers.

### Green Consumer Buying Behavior

Laroche et al., 2001, explained that the green consumers tries to protect the environment in various ways such as recycling, checking the greenness of a package, purchasing green products, saving energy, and so on. Schwepker and Cornwell (1991); Rios et al.(2006), investigated the relationship between attitudes towards the environment and the buying of products or the intentions of use. Consumers who are more closely associated with the environment, are more likely to buy green products (Schuhwerk and Lefkokk-Hagius, 1995). Chan (1996) also found out that individuals who were more concerned about environmental issues purchased more green products. Vlosky et al.(1999), said even though attitudes towards environment can have a fairly strong influence on their purchases. Laroche et al. (2002), explained despite the large number of consumers who express their concerns about environmental problems, many are only willing to act if it does not involve any personal expense. Urien and Kilbourne (2011) suggests that besides the connection of environmental concerns and green behavior other values such as self-enhancement, self-transcendence, collectivism, individualism can also be linked to the green consumer buying behavior. Essoussi and Linton (2010), states that the process of buying green is still

difficult to understand. Though the consumers express a real concern for the environment, but it has been observed that their attitudes are not always converted into their purchasing behavior. The relationships between green attitudes, values and behavior are still very ambiguous.

### **Environmental Activism**

Maloney and Ward, 1973; Chan and Yam, 1995; Haanpää, 2007, have shown that there is a significant relationship between environmental intention and environmental behavior. Chan (1996), believes that environmental concerns represent predispositions or attitudes of individuals, which influence their behavior in a certain favorable or unfavorable way. Researchers feel that consumers holding higher levels of environmental concern would be more ready to engage in environmentally friendly consumer behaviors (Balderjahn, 1988; Schepker and Cornwell, 1991; McCarty and Shrum, 1994; Roberts, 1996; Chan, 1999; Kalafatis et al., 1999; Laroche et al., 2001). Balderjahn (1988) found that individuals who had a positive feeling and attitude towards the environment were more involved in the buying and consumption of green products. Laroche et al. (2001) suggested that attitudes are the most significant predictors of consumers' willingness to pay more for environmentally friendly products. Chan (1999), found that though Chinese consumers demonstrated a powerful environmental concern, but that their actions in regards to the environmental protection were still insignificant. He also said that verbal commitment refers to the readiness or intention expressed by a consumer to do something for the benefit of the environment. The researcher in this paper develops a hypothesis based on environmental activism and green consumer buying behavior.

**H1A:** There is a significant relationship between environmental activism and green consumer buying behavior.

### **Environmental Knowledge**

Chan (1999) believes Environmental knowledge refers to the amount of knowledge an individual have about the environmental issues. Green consumers refer to the amount of environmental knowledge they have in every phase of the buying decision process. Knowledge affects the way in which consumers gather and organize information and determines how they evaluate products and services (Laroche et al., 2001). Martin and Simintiras, 1995 suggested that the influence of environmental knowledge on behavior is contradictory. Maloney and Ward (1973) found out that there was no relationship between environmental knowledge and favorable environmental behavior. Chan (1999) found out that knowledge about environmental issues was important for predicting favorable environmental behavior. The researcher in this paper develops a hypothesis based on environmental knowledge and green consumer buying behavior.

**H2A:** There is a significant relationship between environmental knowledge and green consumer buying behavior.

### **Environmental Concern**

Environmental concern is an attitude that is related to the environmental consequences. Personal experiences, other individual's experiences and the experiences from media interactions influence the consumer attitudes. Environmental concern also refers to the degree of emotionality that an individual have in relation to environmental issues. Kinnear and Taylor (1973), stressed that the level of environmental concern demonstrated by an individual is related to his attitude and behavior while developing a scale for environment concern. Maloney et al. (1975), believes environmental concern refers to the degree of emotionality, level of knowledge and readiness to change a behavior. People's response to environmental appeals is increasingly linked to the belief that individuals can positively influence and contribute to the solution of environmental problems (Ellen et al., 1991). Maloney and Ward, 1973; Chan and Yam, 1995, believes that there

is positive association between environmental affection and environmental behavior. Schlegelmilch and Bohlen (1996) found out that ecological consciousness is another factor that precedes pro-environmental behavior. The researcher in this paper develops a hypothesis based on environmental concern and green consumer buying behavior.

**H3A:** There is a significant relationship between environmental concern and green consumer buying behavior.

### **Recycling Concern**

Many studies in various settings has been tested for the relationship between attitude and intention where the positive influence of attitudes on intentions has been widely supported (e.g. Davies et al., 2002; Tonglet et al., 2004; Chen and Tung, 2010). The more positive attitudes individuals have towards recycling, the more likely they will recycle their waste.

Smallbone (2005) argues that recycling should not be treated as an offshoot of green consumption, but rather as a moral behavior and one that people with shared values and attitudes practice. Schwartz (1977); Jones(1991); Marks and Mayo(1991) also states that recycling can be regarded as a moral issue, since it encompasses all the essential attributes. The researcher in this paper develops a hypothesis based on recycling concern and green consumer buying behavior.

**H4A:** There is a significant relationship between recycling concern and green consumer buying behavior.

### **Perceived Consumer Effectiveness**

The relationship between environmental knowledge, attitude and behavior is called perceived behavioral control. Consumers with a high perceived behavior control have a more intense environmental behavior (De Pelsmacker et al., 2002). Ellen et al. (1991) states that perceived consumer effectiveness refers to the extent to which individuals believe that their actions make a difference in solving a problem. Straughan and Roberts (1999), found out that perceived consumer effectiveness was one of the variables that best explained 'ecologically conscious behavior'. Individuals who are concerned about the environment and those who feel that their individual action may be effective in solving environmental problems will display a more proactive behavior (Moisander, 2007). The researcher in this paper develops a hypothesis based on perceived consumer effectiveness and green consumer buying behavior.

**H5A:** There is a significant relationship between perceived consumer effectiveness and green consumer buying behavior.

### **Resource Saving**

Resource saving refers to the efficient use of energy. Efficient energy use or energy efficiency, is the goal to reduce the amount of energy required to manage products and services. Efficient use of energy use has a direct impact on reducing greenhouse gas emissions and other pollutants, as well as decrease the use of water. Consumers showing concerns on saving resources tend to have an inclination to prefer green products. The researcher in this paper develops a hypothesis based on resource saving and green consumer buying behavior.

**H6A:** There is a significant relationship between resource saving and green consumer buying behavior.

### **Economic Factor**

Buyers will not be willing to buy the green products if they are inferior in quality. Chang and Christiansen (2006), warned that only the name green product or claiming to be green is not sufficient to sell, it also has to meet the

quality requirements. Green products are costlier and the product quality has to meet the quality perceptions of the consumers. Not everyone is ready to pay an extra amount to buy the green product even though they are environment conscious. Research in the US shows that buyers will continue to buy low cost products as in recession rather than going for green products as green products are costly as compared to general products(Washington & Miller, 2010).A study by Manaktola and Jauhari (2007) found that though Indians preach going green yet when it comes to buying they are reluctant to buy green products due the premium charged. Indians are very price conscious and they will search for value for the money paid when preferring a green product. The researcher in this paper develops a hypothesis based on economic factor and green consumer buying behavior.

**H7A:** There is a significant relationship between economic factor and green consumer buying behavior.

#### Skepticism towards Environmental Claims (Misleading Advertisements)

Montoro-Rios et al. (2008); Mostafa (2007); Chan (2001), talked on how consumers respond to green advertising and marketing claims.Shrum et al. (1995), determined that consumers who tend to buy green products do not generally show positive responses to advertising. Green consumers were also noted to be skeptical about advertising that uses green claims (Schrum et al. 1995). Zinkman's study, in the same issue, confirmed these findings (1995).The researcher in this paper develops a hypothesis based on skepticism towards environmental claims and green consumer buying behavior.

**H8A:** There is a significant relationship between skepticism towards environmental claims and green consumer buying behavior.

The proposed research model under study is as follows.



**Figure 1**

The model shows that the factors -environmental activism, environmental knowledge, environmental concern, recycling concern, perceived consumer effectiveness, resource saving, economic factor, and skepticism towards environmental claims have an influence on green consumer buying behavior.

#### METHODOLOGY

A primary research was conducted using a structured questionnaire which consisted the factors of environmental activism, environmental knowledge, environmental concern, recycling concern, perceived consumer effectiveness, resource saving, economic factor, skepticism towards environmental claims and green consumer buying behavior. The research method was descriptive in nature. The sampling elements were the consumers in Pune area. The total sample size was 1047. The method of sampling was nonprobability convenience sampling.

## Variables

Environmental activism (EA) is measured using four statements EA1, EA2, EA3 & EA4. Environmental knowledge (EK) is measured using five statements EK1, EK2, EK3, and EK4 & EK5. Environmental concern (EC) is measured using four statements EC1, EC2, EC3, & EC4. Recycling concern (RC) is measured using five statements RC1, RC2, RC3, RC4 & RC5. Perceived consumer effectiveness (PCE) is measured using five statements PCE1, PCE2, PCE3, PCE4 & PCE5. Resource saving (RS) is measured using three statements RS1, RS2 & RS3. Economic factor (EF) is measured using three statements EF1, EF2 & EF3. Skepticism towards environmental claims (SEC) is measured using three statements SEC1, SEC2 & SEC3. Green consumer buying behavior (GCBB) is measured by thirteen statements GCBB1, GCBB2, GCBB3, GCBB4, GCBB5, GCBB6, GCBB7, GCBB8, GCBB9, GCBB10, GCBB11, GCBB12 & GCBB13. See Appendix for details.

All the variables were measured on a five point Likert's scale.

## Data Analysis

Out of 1047 respondents surveyed, 69.4% were Male and 30.6% were Female. Of the respondents, 5.7% were in the age group 16 to 25 years, 53.9% were in the age group 26 to 35 years, 27.2% in the age group 36 to 45 years, 10% in the age group 46 to 55 years and 3.2% in the age group above 55 years. 18.9% of the respondents had an income of less than INR 300000 per annum, 10.3% had an income of INR 300001 to 600000, 10.3% had an income of INR 600001 to 900000, 27.8% had an income of INR 900001 to 1200000, 21.5% had an income of above INR 1200000.

## Reliability Test

**Table 1**

Sl. No.	Parameters	No. of Items	Chronbach's Alpha
1	GCBB	13	0.945
2	EA	4	0.903
3	EK	5	0.954
4	EC	4	0.899
5	RC	5	0.879
6	PCE	5	0.888
7	RS	3	0.944
8	EF	3	0.889
9	SEC	3	0.895
10	Overall	45	0.973

Reliability test from table 1 shows an individual score of Chronbach's alpha more than 0.87 which shows a strong reliability of individual scales. The overall score of Chronbach's alpha of 0.975 indicates that the scale is strongly reliable. With the reliability test done we move on to do the test for hypotheses.

## Regression Analysis

**Table 2: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870 <sup>a</sup>	0.757	0.755	0.42
a. Predictors: (Constant), SEC, PCE, EA, EF, EC, RS, RC, EK				

**Table 3: Anova<sup>b</sup>**

<b>Model</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	553.083	8	69.135	392.838
	Residual	177.926	1011	0.176	
	<b>Total</b>	<b>731.009</b>	<b>1019</b>		

a. Predictors: (Constant), SEC, PCE, EA, EF, EC, RS, RC, EK  
b. Dependent Variable: GCBB

**Table 4: Coefficients<sup>a</sup>**

<b>Model</b>	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>T</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
1	(Constant)	0.629	0.063	9.999	0.000
	EA	0.587	0.019	31.048	0.000
	EK	-0.041	0.029	-1.419	0.156
	EC	0.231	0.033	7.05	0.000
	RC	-0.048	0.035	-1.352	0.177
	PCE	0.053	0.018	2.963	0.003
	RS	0.112	0.027	4.199	0.000
	EF	-0.07	0.024	-2.939	0.003
	SEC	0.003	0.024	0.112	0.911

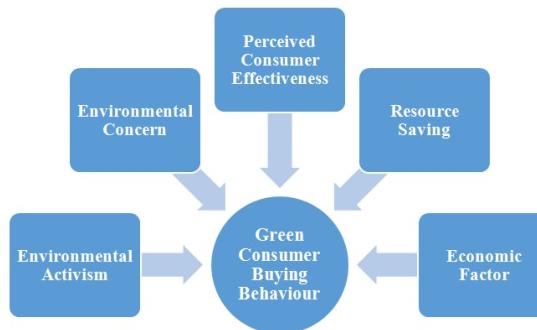
a. Dependent Variable: GCBB

From table 2, we find r square value of 0.757, which shows that 75.7% of the variance on the dependent variable is explained by the independent variables. The F test in table 3 shows that there are significant differences in the means of the variables used.

Observing the t test significant values from table 4, we find that,

- EA is having a significant relationship with GCBB.(Which proves hypothesis H1A)
- EK do not have a significant relationship with GCBB.(Which rejects hypothesis H2A)
- EC is having a significant relationship with GCBB.(Which proves hypothesis H3A)
- RC do not have a significant relationship with GCBB. (Which rejects hypothesis H4A)
- PCE is having a significant relationship with GCBB. (Which proves hypothesis H5A)
- RS is having a significant relationship with GCBB. (Which proves hypothesis H6A)
- EF is having a significant relationship with GCBB. (Which proves hypothesis H7A)
- SEC do not have a significant relationship with GCBB. (Which rejects hypothesis H8A)

Based on the results of the data analysis, the final model will be as follows.

**Figure 2**

The final model shows that the five factors environmental activism, environmental concern, perceived consumer effectiveness, resource saving and economic factor are having an impact on green consumer buying behavior.

Moreover observing the Beta values under unstandardized coefficients from table 4 we find that out of the five factors EA with a score of 0.587 is having the highest impact on GCBB followed by EC, RSS and PCE.

EF has a negative impact on GCBB.

## CONCLUSIONS

The five factors environmental activism, economic concern, perceived consumer effectiveness, resource saving and economic factor are having an impact on green consumer buying behavior. Consumers who are concerned about the environment wellness, take active participation in green activities, concerned about energy and resource saving shows willingness to purchase green products and services. Only having knowledge about environmental degradation or green policies may not lead to purchase of green products. The knowledge needs to be backed by willingness of the individual consumers to save the environment.

The data analysis shows that environmental activism has the highest impact on green consumer buying behavior. Environmental activism is one of the factor that is pulling consumers for green purchase. Research shows that the children and teens in the U.S are generally more concerned than adults about the environment, and are more knowledgeable about green alternatives. They also influence their parents' purchasing decisions. In Canada, both children and parents have strong environmental concerns. The elder people, too, are active green purchasers. American Consumers are showing an interest to learn more on green environment.

Green products are generally costly. In India though the awareness level for green products are increasing, yet due to high cost of the green products, most consumers are reluctant to buy. The fact is also proved from the data analysis which shows that the economic factor has a negative impact on green consumer buying behavior.

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## APPENDICES

**Table 5**

<b>Code</b>	<b>Statements</b>
	<b>Green Consumer Buying Behavior</b>
GCBB1	I read the labels to see if the products are environmentally safe
GCBB2	I am willing to buy products from firms that practice green policies
GCBB3	I try to buy energy efficient household appliances
GCBB4	When there is a choice, I choose the product that causes the least pollution
GCBB5	I have switched products for ecological reasons
GCBB6	I usually buy products made from recycled materials
GCBB7	I make a special effort to buy biodegradable products
GCBB8	I buy products in refillable containers
GCBB9	I will not buy products that have excessive packaging
GCBB10	I prefer to buy products not tested on animals
GCBB11	I use environmentally safe soaps and detergents
GCBB12	I avoid buying products in aerosol containers
GCBB13	I prefer to buy durable goods
<b>Environmental Activism</b>	
EA1	I am interested in reading reports on environmentally friendly products
EA2	I like helping a group whose main aim is to preserve the environment
EA3	I give money to a cause or an environmental group
EA4	I like taking part in a protest related to an environmental cause
<b>Environmental Knowledge</b>	
EK1	I know how to preserve and not cause damage to the environment

<b>Table 5: Contd.,</b>	
EK2	I know the meaning of 'global warming'
EK3	I know the meaning of 'acid rain'
EK4	I know the problem of ozone depletion
EK5	I know that plastic bags take many years to decompose and cause pollution
<b>Environmental Concern</b>	
EC1	I am very concerned about the problem of pollution in general
EC2	I am very concerned about air pollution and the problem of ozone depletion
EC3	I become angry when I think about the harm caused to life by pollution
EC4	When I think of the ways in which firms pollute, I get frustrated and angry
<b>Recycling Concern</b>	
RC1	I prefer to hand in at the chemist's medicine that is left over or past its sell-by date
RC2	I usually keep separate piles of rubbish for recycling
RC3	I am prepared to walk several blocks to take rubbish to the recycling bins
RC4	I have convinced members of my family and friends to recycle
RC5	I feel the government should pass legislation making recycling mandatory
<b>Perceived Consumer Effectiveness</b>	
PCE1	I feel worried to see a contaminated river or the sea
PCE2	Pollution is a serious problem, as a citizen I should try to reduce pollution at the individual level
PCE3	I believe we should support the environmentalists
PCE4	Every individual collectively can make a change to the environment
PCE5	Every individuals small steps towards energy conservation will lead to a great change
<b>Resource Saving</b>	
RS1	I conserve energy by turning off lights and electrical appliances when I am not using them
RS2	I try to reduce the amount of water I use
RS3	I try to reduce the amount of rubbish I produce
<b>Economic Factor</b>	
EF1	We should support buying of green products though they are costly
EF2	I am willing to pay more for green products
EF3	I am willing to pay more taxes in order to protect the environment
<b>Skepticism Towards Environmental Claims</b>	
SEC1	Most of the environmental claims made on package labels or in advertising are false and/or confusing
SEC2	The environmental claims made on package labels or in advertising should be regulated more closely
SEC3	Products labelled as 'environmentally safe' or 'ecological' are just another selling point